

REMARKS

Claims 1-7 and 20-34 are pending in the present application. Claims 8-19 have been cancelled without prejudice or disclaimer of the subject matter contained therein. New claims 20-34 have been added. Claims 1, 6-7, 25, 31 and 34 are independent.

The claims have been amended to further clarify the invention and to improve form according to U.S. patent practice. No new matter is added.

Rejection under 35 U.S.C § 103

Claims 1-3, 6-9 and 18-19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takano et al. in view of Ito et al. Claims 4-5 and 10-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takano et al. in view of Ito et al. and Miyamoto et al. These rejections, insofar as they pertain to the presently pending claims, are respectfully traversed.

Without acquiescing to any of the Examiner's allegations made to rejection the claims, but to expedite prosecution only, independent claims 1, 6 and 7 have amended to further emphasize the distinguishing features of the invention, and previous independent claims 10, 18 and 19 have been cancelled. Takano et al. and Ito et al., either taken singly or in combination thereof, fail to teach or suggest the features of these amended independent claims.

Regarding independent claim 1, firstly, Takano is directed to recording update data sequentially into a data storage area. As shown in Fig. 2, new update data is written into a next available block (Bn+1) such that the written area F1 is enlarged while the non-written area F2 is decreased. Similarly, as shown in Fig. 10b, Takano writes update data to a next available block ("A Area") from the top of the reserved area 21. Thus, there is no writing replacement-recording data "starting from a rear portion of the user data", as recited in independent claim 1. For example, as shown in Fig. 3A of the present application, replacement-recording data is written between an area 'a-b' at the rear portion of the user data area.

Secondly, as correctly acknowledged by the Examiner (see page 3, lines 2-3 of the last Office Action), Takano does not teach “writing replacement-recording data” “in response to a request that the specified area having the data written therein be overwritten” as recited in claim 1.

Thirdly, Takano’s reserved area 21 and other areas A and B have fixed sizes which are not changed as shown in Fig. 10b and Takano’s data file F (F1 + F2) also has a fixed size as shown in Fig. 2. In clear contrast, in Applicants’ invention, the last logical sector number (last LSN) of the user data area is changed in accordance with the replacement recording operation, e.g., as shown in Fig. 3A of the present application. As a result, the first information indicating the last LSN “indicates a change in a size of the user data area according to the replacement recording operation” (emphasis added) as recited in claim 1. In the Office Action on page 2, the Examiner cites column 6, lines 8-10 of Takano et al. for allegedly teaching these features. However, that portion of Takano merely discloses that the written area F1 (where data has been written) within the fixed-size file F is increased while the non-written area F2 (where data has not been written) of the same fixed-size file F is decreased as shown in Fig. 2. Thus in Takano, there is absolutely no mention of changing the LAST logical sector number of the user data area, which indicates a change in the actual size of the user data area.

Furthermore, Ito et al. does not overcome these deficiencies of Takano et al. Ito et al. is directed to replacing a defective block with a spare block. However, Ito et al. records data into spare blocks in a sequential manner and thus does not teach or suggest “writing replacement-recording data associated with the request, starting from a rear portion of the user data area” as recited in claim 1. Also, in Ito et al., there is no change in the size of the user data area and thus there is no recording of first information, wherein “the recorded first information indicates a change in a size of the user data area according to the replacement recording operation” as recited in claim 1.

Moreover, Miyamoto does not overcome these deficiencies of Takano and Ito et al. since Miyamoto is merely relied on for teaching multiple recording layers of a disc. Accordingly, claim 1 and its dependent claims are allowable over the applied art.

Regarding independent claims 6 and 7, claim 6 and 7 recite similar features as claim 1 and are thus allowable based on the same or similar reasons discussed above. Further, claim 6 recites “extending a size of the outer spare area as large as a size of the area where the replacement-recording data is written”, and claim 7 recites “determining whether or not to extend a size of the outer spare area in consideration of a size of the replacement-recording area”. Further, these claims recite that the first information indicates a change in a size of the user data area according to the extension of the outer spare area”. These features are clearly absent from Takano et al., Ito et al., and Miyamoto.

Accordingly, all the independent claims and their dependent claims (due to the dependency) are patentable over the applied references, and the rejections are improper and withdrawn.

New Claims

Dependent claims 20-24 further emphasize the distinguishing features of the invention over the applied art. For example, none of the applied art including Takano et al. and Ito et al. teaches or suggests the feature of *jumping to an area immediately before the end of the user data area* in a *non-sequential* manner so as to write the replacement-recording data to that area, as recited in claim 20. Takano writes the updated data to a next available area (A Area) in the reserved area 21 in a sequential manner as shown in Fig. 10b. Similarly, Ito et al. writes replacement data to a spare block in a sequential manner.

Further, none of the applied art teaches or suggests the feature of filling up the user data area with various replacement-recording data, first starting with the rear portion of the user data area and then areas of the user data area before the rear portion in a *rear-to-front direction*, as recited in claim 21 (e.g., see Figs. 3A and 3B of the present application).

Thus, claims 20-24 are allowable due to the dependency on independent claims 1 and 6 and/or the additional features recited therein.

Apparatus claims 25-30 correspond to method claims 1-3 and 20-22, respectively. Apparatus claims 31-33 correspond respectively to method claims 6 and 23-24. Storage medium claim 34 corresponds to method claim 1. Thus, new claims 25-34 are believed to be allowable.

Accordingly, indication of allowance of new claims 20-34 is respectfully requested.

CONCLUSION

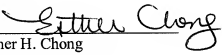
For the foregoing reasons and in view of the above clarifying amendments, the Examiner is respectfully requested to reconsider and withdraw all of the objections and rejections of record, and to provide an early issuance of a Notice of Allowance.

Should there be any outstanding matters which need to be resolved in the present application, the Examiner is respectfully requested to contact Esther H. Chong (Registration No. 40,953) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: July 24, 2008

Respectfully submitted,

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